

ABSTRACT

- 3 Methods, apparatus and systems for multilevel data communication comprises dividing a
- 4 set of information bits to be transmitted into a first group and a second group; encoding
- 5 the first group to generate a block code, selecting a subset of symbols in a constellation of
- 6 symbols in dependence on the block code according to a Gray-coded mapping function,
- 7 selecting a symbol within the subset in dependence on the second group according to a
- 8 Gray-coded mapping function, and transmitting the selected symbol.